

# INTERNATIONAL SEARCH REPORT

International application No

PCT/US2004/009962

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC 7 B01D53/14 B01D53/62 B01D53/86

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B01D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 436 174 B1 (BASF AG) 20 August 2002 (2002-08-20) cited in the application paragraph '0022! - paragraph '0033!; claims 1-15; figures 2-5	1-42
X	US 4 217 237 A (EXXON RESEARCH & ENGINEERING CO.) 12 August 1980 (1980-08-12) cited in the application claims 1-12; examples 1,2	1-42
X	US 4 094 957 A (EXXON RESEARCH & ENGINEERING CO.) 13 June 1978 (1978-06-13) cited in the application claims 1,4; examples 1-12	1-42

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

\* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the International filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed Invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed Invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search

16 August 2004

Date of mailing of the International search report

30/08/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Luethe, H

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No  
PCT/US2004/009962

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6436174	B1	20-08-2002	DE 19828977 A1 AT 245469 T AU 756811 B2 AU 4776499 A BR 9911708 A CA 2336043 A1 CN 1136030 B DE 59906371 D1 EG 22272 A WO 0000271 A1 EP 1091796 A1 ID 29380 A JP 2002519171 T RU 2227060 C2	30-12-1999 15-08-2003 23-01-2003 17-01-2000 20-03-2001 06-01-2000 28-01-2004 28-08-2003 31-12-2002 06-01-2000 18-04-2001 30-08-2001 02-07-2002 20-04-2004
US 4217237	A	12-08-1980	AU 506199 B2 AU 1480076 A CA 1081917 A1 DE 2628376 A1 FR 2316999 A1 GB 1567944 A GB 1567945 A GB 1567943 A IT 1061456 B JP 1007812 B JP 1536105 C JP 52005679 A JP 1034092 B JP 1550122 C JP 61071819 A JP 1159021 A JP 1732806 C JP 4008089 B MX 4715 E MY 6383 A MY 6483 A MY 6583 A NL 7606979 A , B, PH 12585 A US 4112051 A US 4112050 A US 4112052 A	20-12-1979 15-12-1977 22-07-1980 13-01-1977 04-02-1977 21-05-1980 21-05-1980 21-05-1980 28-02-1983 10-02-1989 21-12-1989 17-01-1977 18-07-1989 23-03-1990 12-04-1986 22-06-1989 17-02-1993 14-02-1992 11-08-1982 31-12-1983 31-12-1983 31-12-1983 28-12-1976 27-06-1979 05-09-1978 05-09-1978 05-09-1978
US 4094957	A	13-06-1978	AU 515976 B2 AU 3096777 A BR 7708271 A CA 1098506 A1 DE 2755569 A1 FR 2374071 A1 GB 1587874 A IT 1088901 B JP 1464254 C JP 53081490 A JP 63007813 B MY 4883 A NL 7712558 A US 4217238 A	14-05-1981 15-11-1979 15-08-1978 31-03-1981 15-06-1978 13-07-1978 08-04-1981 10-06-1985 28-10-1988 18-07-1978 18-02-1988 31-12-1983 16-06-1978 12-08-1980